



Los Angeles County Mobile Intensive Care Nurse (MICN) Core Objectives



**EMERGENCY MEDICAL
SERVICES AGENCY**
LOS ANGELES COUNTY

Developed in Collaboration with:

Association of Prehospital Care Coordinators

and

Los Angeles County EMS Agency

EMS Agency Administration

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Emergency Medical Services Overview

By the end of this presentation, the participant will be able to:

1. Define Emergency Medical Services
2. Describe the purpose of the following components of the Los Angeles County EMS System:
 - a) EMS Authority
 - b) EMS Agency
 - c) Commission
 - d) Base Hospital
 - i) Medical Director
 - ii) Prehospital Care Coordinator
 - iii) Mobile Intensive Care Nurse
 - e) 9-1-1 Receiving Hospitals
 - f) Specialty Centers
 - g) Provider Agencies
 - i) Public
 - ii) Private
 - h) EMS Responders
 - i) EMT-I
 - ii) EMT-P
 - i) Non-EMS Responders
 - i) Police
 - ii) Bystander
 - j) Dispatch
3. List the requirements for MICN certification and recertification
4. Identify the types of rescue units and their capabilities

Legal Aspects of Prehospital Care

By the end of this presentation, the participant will be able to:

1. Identify the legislation that governs prehospital care
2. Describe the purpose of:
 - a) Base Hospital Treatment Guidelines (BHTG)
 - b) Standing Field Treatment Protocols (SFTP)
 - c) Medical Control Guidelines (MCG)
 - d) Color Code Drug Dosage/L.A. County Kids
 - e) Prehospital Care Policy Manual
 - f) Base Hospital Form Manual
3. Describe the MICN/Base Hospital role when a physician is at the scene
4. Describe the MICN/Base Hospital role when a patient is refusing treatment or transport
5. Define and differentiate between the different types of consent
 - a) Informed
 - b) Expressed
 - c) Implied
 - d) Involuntary
6. Define release at scene
7. Describe the MICN and paramedic roles with a patient requesting to sign AMA
8. Describe the MICN and paramedic role in the following situations:
 - a) Child Abuse and Neglect
 - b) Elder/Dependant Abuse and Neglect
 - c) Sexual Assault
 - d) Victim of Violent Crimes
 - e) Treatment and Transport of Minors
9. Describe the role of the MICN and paramedic in Paramedic Trial and Scientific Studies
10. Discuss the factors which should be considered prior to determining the appropriateness of an ALS to BLS downgrade

Patient Destination

By the end of this presentation, the participant will be able to:

1. Identify and describe correct patient destination and rationale, when given a scenario, for the following:
 - a) Most Accessible Receiving Hospital (MAR)
 - b) Emergency Department Approved for Pediatrics (EDAP)
 - c) Perinatal Center
 - d) Pediatric Medical Center (PMC)
 - e) Pediatric Trauma Center (PTC)
 - f) Trauma Center
 - g) STEMI (ST Elevation MI) Receiving Center (SRC)
 - h) Sexual Assault Response Team Center (SART)
 - i) Hyperbaric Chamber
2. Recognize when it is appropriate to honor a hospital diversion request
3. Recognize when it is appropriate to honor a patient's hospital request
4. Identify the various categories of diversion

Base Hospital Form Training

By the end of this presentation, the participant will be able to:

1. Describe the purpose, function and goals of documentation and data collection, as it pertains to the Trauma and Emergency Medicine Information System (TEMIS)
2. Identify the mandatory fields of the Base Hospital Form (BHF) and the rationale for data entry
3. Describe where to document a “re-contact” and the appropriate use of page 2
4. Demonstrate correct documentation on the BHF from a given scenario

Radio Communications

By the end of this presentation, the participant will be able to:

1. Describe the means of communication utilized within the Los Angeles County EMS System:
 - a) Telephone
 - b) Base Station Med Channel
 - c) Paramedic Radio
 - d) ReddiNet™
 - e) Hospital Emergency Alert Radio (H.E.A.R.)
2. Identify appropriate language used to effectively communicate via the telecommunication system
3. List methods to improve radio communication
4. Compare and contrast one-way versus two-way telecommunications
5. Identify important concepts from the On-line Communication Medical Control Guideline

Basic Science Review

By the end of this presentation, the participant will be able to:

1. Discuss the functions of 3 body fluid compartments:
 - a) Intracellular
 - b) Intravascular
 - c) Interstitial
2. Identify the S/S of hypoxia
3. Describe the effects of hypercarbia on the brain
4. Describe the role of the following electrolytes:
 - a) Sodium
 - b) Potassium
 - c) Calcium
 - d) Bicarbonate
5. Contrast osmosis and diffusion
6. Describe the process of osmosis related to IV solutions
7. Name common medical conditions that best demonstrate the act of osmosis
8. Describe cellular metabolism
9. Define ventilation
10. Define cellular respiration
11. Define hyperventilation
12. Describe the mechanics of ventilation
13. List and describe the two types of chemoreceptors
14. Describe the location and role of baroreceptors
15. Define the following terms:
 - a) Afterload
 - b) Atrial kick
 - c) Cardiac output
 - d) Chronotropy

- e) Inotropy
- f) Peripheral vascular resistance (PVR)
- g) Preload
- h) Starling's Law
- i) Stroke volume (SV)

16. List the function of the Autonomic Nervous System

17. Describe the role of catecholamines

18. Describe the response of Beta 1 and Beta 2 stimulation

19. Contrast the differences between low, moderate, and high dose dopamine

20. Describe the four vital centers found in the brainstem and their functions

21. Review blood flow through the heart including chambers, heart valves, arteries and veins

Shock

By the end of this presentation, the participant will be able to:

1. Distinguish the assessment findings of the following types of shock:
 - a) Cardiogenic
 - b) Hypovolemic
 - c) Distributive
 - i) Septic
 - ii) Neurogenic
 - iii) Anaphylactic
 - d) Obstructive
2. Identify a patient in compensated and decompensated shock listed in objective #1
3. Define perfusion
4. Define poor perfusion
5. Describe how the BHTGs are designed for a patient in shock
6. Describe the therapies used in the field to treat the different types of shock listed in objective #1
7. State the indications for accessing a Peripheral Vascular Access Device (PVAD)
8. State which medication can not be administered into a PVAD
9. List the complications associated with accessing a PVAD
10. Instruct a paramedic in the procedure used to prep and access a PVAD
11. Describe which type of PVAD can be accessed in the field

GI/Abdominal Emergencies

By the end of this presentation, the participant will be able to:

1. Describe which BHTG is used for non-traumatic abdominal pain and how it is utilized
2. List the pharmacological agents used to in the field to treat abdominal pain and indication for each
3. Contrast the difference between somatic, visceral and referred pain
4. Describe the methods used to assess abdominal pain
 - a) OPQRST
 - b) Pain Assessment Medical Control Guideline

Cardiac Emergencies

By the end of this presentation, the participant will be able to:

1. Distinguish the assessment findings of the following cardiac emergencies:
 - a) Non-myocardial chest pain
 - b) Heart failure
 - c) Acute Coronary Syndrome (ACS)
 - d) Aortic aneurysm emergencies
 - e) Angina
 - f) Hypertension
 - g) Pacemaker failure
 - h) Automatic Internal Cardiac Defibrillator (AICD)
2. Describe which BHTG is used for those cardiac emergencies listed in objective #1 and how it is utilized
3. List the pharmacological agents used in the field to treat those cardiac emergencies listed in objective #1 and indications for each
4. Describe the field treatment that may be performed by paramedics prior to base contact for those cardiac emergencies listed in objective #1
5. Identify the 12-Lead interpretation that determines STEMI Receiving Center (SRC) patient destination
6. Identify important concepts from the following Medical Control Guidelines:
 - a) ALS - 12 Lead EKG
 - b) Cardiac Monitor
 - c) Hypertension
 - d) Transcutaneous Pacing
 - e) Nitroglycerin

Dysrhythmias/Cardiac Arrest

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings associated with:
 - a) Bradycardia
 - b) Sinus Tachycardia
 - c) SVT
 - d) PVCs
 - e) Ventricular Tachycardia
 - f) Ventricular Fibrillation
 - g) Asystole
 - h) PEA
 - i) Heart blocks
 - j) Atrial Fibrillation
 - k) Atrial Flutter
2. Describe which BHTG is used for the conditions listed in objective #1 and how it is utilized
3. Describe the field treatment that may be performed by paramedics prior to base contact for those dysrhythmias listed in objective #1
4. List the pharmacological agents used to treat dysrhythmias in the field setting and indications for each
5. Describe the transport destination options for patients in medical cardiac arrest
6. Describe the role of the base hospital in field pronouncement of death
7. Identify the required documentation on the BHF for the following:
 - a. Cardiac arrests
 - b. Field pronouncement
 - c. STEMI
 - d. TCP
8. Compare and contrast a “Do Not Resuscitate” (DNR) and the “Advanced Health Care Directive” (AHCD)
9. Identify the important concepts from the Intraosseous Medical Control guideline

Respiratory Emergencies

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings of the following respiratory emergencies:
 - a) Respiratory distress without wheezes
 - b) Respiratory distress with basilar rales
 - c) Respiratory distress with wheezes
2. Describe which BHTG is to be used for conditions listed in objective #1 and how it is utilized
3. Describe the field treatment that may be performed by paramedics prior to base contact for those respiratory conditions listed in objective #1
4. List the pharmacological agents used in the field to treat those respiratory conditions listed in objective #1 and indications for each
5. Compare and contrast assessment findings of the following:
 - a) Pneumonia
 - b) Chronic Obstructive pulmonary Disease
 - c) Congestive Heart Failure
 - d) Respiratory Failure
6. Identify the important concepts of the Oxygen Medical Control Guideline

Airway Management

By the end of this presentation, the participant will be able to:

1. Describe airway obstruction associated with the following:
 - a) Foreign Body
 - b) Swelling
 - c) Trauma
 - d) Secretions
 - e) Tongue
2. Identify the important concepts from the Continuous ETT Monitoring Medical Control Guideline
3. Identify the important concepts from the Airway Algorithm
4. List the indications for Endotracheal Tube (ETT) placement
5. Describe the assessment findings that paramedics should report after establishing an advanced airway
6. List the indications for the use of the Esophageal Tracheal Combitube (ETC)
7. Describe methods to assist the paramedic placing an ETC
8. Identify appropriate airway procedures for patients with stomas or tracheotomy devices
9. Describe the indications and contraindications for the use of Continuous Positive Airway Pressure (CPAP) in the field
10. Define:
 - a) Manageable airway
 - b) Unsecured airway
 - c) Uncontrolled (unmanageable) airway

Neurologic Emergencies/Behavioral Emergencies

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings of the following neurological emergencies:
 - a) Altered level of consciousness
 - b) Behavioral emergencies
 - c) Seizures
 - d) Local neuro/stroke
 - e) Syncope
 - f) Autonomic dysreflexia
 - g) Diabetes
2. Describe which BHTG should be utilized for those emergencies listed in objective #1 and how it is utilized
3. Describe the field treatment that may be performed by paramedics prior to base contact for conditions listed in objective #1
4. List the pharmacological agents used in the field to treat these medical conditions listed in objective #1 and indications for each
5. Relate A-E-I-O-U-T-I-P-S to the adult patient
6. List the elements of the Los Angeles Pre-hospital Stroke Scale (LAPSS) assessment tool
7. List the indications for application of restraints in the field
8. Discuss the Los Angeles County definition of Status Epilepticus
9. Identify appropriate destination for patients with behavioral emergencies
10. Identify the important concepts of the following Medical Control Guidelines:
 - a) Hypoglycemia
 - b) Restraints
11. Identify the important concepts from the Restraints Algorithm

Environmental Emergencies

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings for the following environmental emergencies:
 - a) Near drowning
 - b) Heat related emergencies
 - c) Cold related emergencies
 - d) Envenomation
 - e) Bites and stings
 - f) Decompression emergencies
2. Describe which BHTG should be used for those emergencies listed in objective #1 and how it is utilized
3. Describe the field treatment that may be performed by paramedics prior to base contact for conditions listed in objective #1
4. List the pharmacological agents used in the field to treat these conditions listed in objective #1 and indications for each

Poisoning and Overdose

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings of the following ingestions:
 - a) CNS depressants
 - b) CNS stimulants
 - c) Hallucinogens
 - d) Organophosphate
 - e) Beta Blockers
 - f) Calcium Channel Blockers
2. Describe which BHTG should be used for those emergencies listed in objective #1 and how it is utilized
3. Describe the field treatment that may be performed by the paramedic prior to base contact for conditions listed in objective #1
4. List the pharmacological agents used in the field to treat these conditions listed in objective #1 and indications for each

Weapons of Mass Destruction

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings for the following exposure emergencies:
 - a) Chemical
 - b) Biological
 - c) Radiological
2. Describe which BHTG should be used for those conditions listed in objective #1 and how it is utilized
3. List the pharmacological agents used in the field to treat these conditions listed in objective #1 and indications for each
4. List the benefits of early notification for the receiving facility

Approach to Trauma and Trauma Destination

By the end of this presentation, the participant will be able to:

1. Utilize Los Angeles County EMS References “Trauma Triage” and “Trauma Patient Destination” to determine appropriate destination of a real or simulated patient
2. Describe how “judgment” can be utilized by the Base Hospital for patient destination, in the absence of a patient meeting trauma criteria or guidelines
3. Describe appropriate primary (Initial) and secondary assessments of the trauma patient
4. Describe trauma mechanism of injury as it relates to injury prediction, trauma transport and treatments
5. Define the term "Golden Hour"
6. Identify traumatic injury presentations that require immediate or rapid transport
7. Describe which BHTGs are used for trauma patients and how they would be utilized

Head and Neck Injuries/EENT

By the end of this presentation, the participant will be able to:

1. Describe the anatomy and physiology of organs and structures related to head, neck and EENT injuries
2. Describe the pertinent assessment findings for a patient with head, neck and EENT injuries
3. Anticipate head, neck and EENT injuries based on blunt and penetrating mechanisms of injury
4. Describe which BHTG is used for a patient with head, neck or EENT injuries and how it is utilized
5. List the indications for spinal immobilization
6. Describe the MICNs responsibility when spinal immobilization indications are met
7. Discuss the treatment that can be rendered by paramedics prior to base contact for a patient with head, neck or EENT injuries
8. Describe the pharmacological agents used in the field to treat head, neck and EENT injuries
9. Identify important concepts from the Spinal Immobilization MCG

Chest and Abdominal Trauma

By the end of this presentation, the participant will be able to:

1. Describe the anatomy and physiology of organs and structures related to chest and abdominal injuries
2. Describe pertinent assessment findings for the following traumatic chest injuries:
 - a) Flail chest
 - b) Open pneumothorax
 - c) Tension pneumothorax
 - d) Cardiac tamponade
3. Describe pertinent assessment findings for a patient with traumatic abdominal injuries
4. Anticipate abdominal and chest injuries based on blunt and penetrating mechanisms of injury
5. Compare and contrast signs and symptoms of tension pneumothorax versus cardiac tamponade
6. Describe which BHTG is used for a patient with traumatic chest or abdominal injuries and how it is utilized
7. List the indications for a needle thoracostomy
8. Instruct the paramedic on how to perform a needle thoracostomy
9. Describe field treatment of a flail chest
10. Describe field treatment that may be performed by paramedics prior to base contact for a patient with traumatic chest or abdominal injuries
11. List the pharmacological agents used in the field to treat chest and/or abdominal injuries and indications for each

Musculoskeletal Injuries

By the end of this presentation, the participant will be able to:

1. List the potential injuries associated with musculoskeletal trauma
2. List the pertinent assessment findings for a patient with extremity injuries
3. Describe which BHTG is used for a patient with musculoskeletal injuries and how it is utilized
4. Describe when the following field interventions are indicated:
 - a) Spinal immobilization
 - b) Traction splints
 - c) Rigid or conforming splints
 - d) Re-alignment
5. Identify the appropriate interventions that could be used for the following injuries:
 - a) Uncontrolled external bleeding
 - b) Amputations
 - c) compromised neurovascular status
6. Describe the treatment that can be rendered by paramedics prior to base contact for a patient with musculoskeletal injuries
7. List the pharmacological agents used in the field to treat musculoskeletal injuries and indications for each

Crush Injury/Syndrome

1. Discuss the bodies response to crush injuries:
 - a) cellular response
 - b) vascular response
 - c) systemic response
2. Define:
 - a) Crush injury
 - b) Crush syndrome
 - c) Compartment syndrome
3. Describe the signs and symptoms of compartment syndrome
4. Describe which BHTG is used for Crush Injury and Crush Syndrome and how it is utilized
5. List the field treatment that can be performed by paramedics prior to base contact for a patient with crush injuries
6. List the pharmacological agents used in the field to treat Crush Injuries and Crush Syndrome and indications for each.

Burn Management

By the end of this presentation, the participant will be able to:

1. Describe the classifications of burns
2. List the physiological complications arising from burn injuries
3. List the predictors that affect burn severity
4. Calculate the Total Body Surface Area (TBSA) using the rule of 9's
5. Describe which BHTG is used for a patient with burn injuries and how it is utilized
6. Describe the field treatment that may be performed by paramedics prior to base contact for a patient with burn injuries
7. List the pharmacological agents used in the field to treat burn injuries and indications for each
8. Discuss the appropriate rationale for burn patient destination
9. List the signs and symptoms and describe appropriate treatment of carbon monoxide poisoning

Pediatric Trauma

By the end of this presentation, the participant will be able to:

1. Describe the anatomical and physiological differences in the pediatric patient versus the adult patient as it pertains to trauma
2. Identify the five leading causes of death from traumatic pediatric injuries
3. List the components of a pediatric trauma assessment
4. Describe which BHTG is used for the pediatric trauma patient and how it is utilized
5. Discuss the field treatment that can be performed by paramedics prior to base contact for the pediatric trauma patient
6. List the pharmacological agents used in the field to treat pediatric trauma injuries and indications for each
7. Identify the injuries/findings that meet Pediatric Trauma Center criteria or guidelines
- 8.

Disaster Triage and Multi-Casualty Incidents

By the end of this presentation, the participant will be able to:

1. State the goals of disaster triage
2. Describe START (Simple Triage and Rapid Transport) triage system
3. Describe the Jump START triage system
4. Discuss the roles of the following when involved with an Multi-Casualty Incident (MCI):
 - a) Medic Alert Center
 - b) Base Hospital\
 - c) MICN
 - d) Receiving Hospital
 - e) Provider agencies
 - f) Paramedic
5. Describe the transport priority guidelines for an MCI
6. Identify appropriate documentation of an MCI including usage of the Base Hospital MCI Form as an alternative for patient information in an MCI.
7. Discuss the key concepts and the roles of MICNs and field personnel in managing a multi-casualty burn disaster.

Pediatric

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings of the following conditions:
 - a) ALTE
 - b) Seizures
 - c) Cardiopulmonary arrest
 - d) Dysrhythmias
 - e) Shock
 - f) Respiratory distress
2. Relate A-E-I-O-U-T-I-P-S to the pediatric patient
3. Describe the components of the Pediatric Assessment Triangle
4. Describe which BHTG is used for the conditions listed in objective #1 and how it is utilized
5. Describe the field treatment that may be performed prior to base contact for pediatric conditions listed in objective #1
6. List the pharmacological agents used in the field to treat those pediatric conditions listed in objective #1 and the indications for each
7. State the appropriate age range for pediatric patients
8. Discuss and describe uses of the L.A. County Color Code for Kids
9. List the appropriate L.A. County approved airway adjuncts for the pediatric patient and indications for their use
7. Utilize Los Angeles County EMS Reference "Pediatric Destination" to determine appropriate destination of a real or simulated patient
8. Identify the important concepts of the Pediatric Age MCG

Obstetric Emergencies

By the end of this presentation, the participant will be able to:

1. Identify the assessment findings for the following normal obstetrical conditions:
 - a) Normal perinatal
 - b) Normal neonatal
 - c) Stages of Labor (3)
2. Identify the assessment findings for the following obstetrical emergencies:
 - a) Spontaneous and or threatened abortion
 - b) Placenta previa
 - c) Placenta abruptio
 - d) Ectopic pregnancy
 - e) Pregnancy induced hypertension (PIH)
 - f) Diabetic complications
3. Describe the following complications of labor, to include:
 - a) Pre-mature labor/delivery
 - b) Breech presentation
 - c) Cord prolapsed
 - d) Meconium
 - e) Nuchal cord
 - f) Multiple births
4. Describe which BHTG is used for those conditions listed in objectives #1, #2 and #3 and how it is utilized
5. Direct the field provider through the delivery process up to and including care of the newborn
6. Identify appropriate destination for the perinatal and neonatal patient

Special Consideration Patients

By the end of this presentation, the participant will be able to:

1. Discuss the unique differences and appropriate management of the following patients:
 - a. Geriatric
 - b. Potentially infectious
 - c. Immunocompromised
 - d. Mobility Disorder
2. Discuss the specific consideration in the management of the renal failure patient
- 3.